

Split

Work Order ID 67665 -2

Tuesday, March 29, 2011 9:25:08 AM



Item ID: D2573

Accept



Setup Start



Revision ID:

Stop



Item Name: Saddle, Alt Out 205

Start Date: 3/30/2011 Start Qty: 12.00



Cust Item ID:

Required Date: 4/13/2011 Req'd Qty: 12.00



Customer:

Reference:

Approvals: Process Plan:

mf

Date: 11-03-29

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2573

Rev E

100

0.00



HAA5 CNC VERTICAL MACHINING #1

HAAS I

Memo

0.00

GA 11/04/06

HAAS CNC vertical machine #1

Program Batch No. 67665 Double check by [initials] 1-Machine Step No 1 per Folio FA051 and inspect per attached Dimension Sheets 2-Machine Step No 2 per Folio FA051 and inspect per attached Dimension Sheets 3-Machine Step No 3 per Folio FA051 and insp

110

0.00



CONVENTIONAL MILLING MACHINE

Mill Conv

Memo

0.00

GA 11/04/06

29 11.5.10

Conventional Milling Machine

Machine keyway as per dwg D2573 & D2574

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

GA 11/04/06

29 11.5.10

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2573 PAR #: N/A Fault Category: Manufacturing NCR: Yes No DQA: A Date: 11-05-20
 Resolution: Use as is Disposition: Use as is QA: N/C Closed: OK Date: 11/05/24

NCR: 67665-2		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11-5-11	-	.500" dimension in view B-B is over tolerance by .005" on one piece and .002" on another. - Origin for third op. X-	CP 11.05.11	double check third operation X-axis origin for every part in addition to 2nd operation double check on X axis Note: 2nd op. tooling should be corrected.	11-6-11	S 11/05/13	CP 11.05.11 OS/042	S 11/05/13
		axis taken on center of workpiece and not center of fixture combined with 2nd operation inconsistency caused this problem. RC: WOP	CP 11.05.11	Red tag for test fit by ENGINEERING Acceptable based on test fit P 11.05.13 →		S 11/05/13	CP 11.05.11 OS/042	S 11/05/13

NOTE: Date & initial all entries

Work Order ID 67665

Tuesday, March 29, 2011 9:25:08 AM



Page 2

Item ID: D2573

Accept



Setup Start



Revision ID:

Stop



Item Name: Saddle, Aft Out 205

Start Date: 3/30/2011 Start Qty: 12.00



Cust Item ID:

Required Date: 4/13/2011 Req'd Qty: 12.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

130

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00



Hand/Finish

Memo

0.00

Hand Finishing

150

White Gloss (Ref 4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME:

FINISH TIME:

OVEN TEMPERATURE

M116964

2:30
3:20

3:20

6x Ø m.d 11/05/16

6x Ø m.d 11/05/16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action - Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 67665

Tuesday, March 29, 2011 9:25:08 AM

Page 3

Item ID: D2573

Accept

Revision ID:

Item Name: Saddle. Aft Out 205

Setup Start

Stop

Start Date: 3/30/2011 Start Qty: 12.00

Required Date: 4/13/2011 Req'd Qty: 12.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

Stop

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

6 BL 11-5-16

170

Identify as per dwg & Stock Location: 434

0.00



Packaging

Memo

0.00

Packaging

11/5/16 (6) S

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/5/18 J
11-05-18
(6)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, March 29, 2011 9:25:06 AM

Page 1

Work Order ID: 67665

Parent Item: D2573

Parent Item Name: Saddle, Aft Out 205



Start Date: 3/30/2011

Required Date: 4/13/2011

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP: 1 As Per RevE 06-01-27 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D6101-007

Manufactured No

100

Each

53.0000

1

12



Saddle Billet

Location

Loc Qty

Loc Code

MAT042

20

66967

20

MAT045

33

65383

13

65954

20

9

By 11/04/05

3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order: 67665
Description: Saddle, Aft Outboard	Part Number: D2573
Inspection Dwg: D2573 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443						Vern	GA-01
B	1.745	1.755		1.750	1.750	1.750	1.750	"	"
C	3.495	3.505		3.500	3.500	3.500	3.500	"	"
D	1.745	1.755		1.750	1.750	1.750	1.750	"	"
E	7.990	8.010		8.000	8.000	8.000	8.000	Vern	CNC-02
F	0.490	0.510		.502	.503	.508	.503	Vern	GA-01
G	0.257	0.262		0.259	0.259	0.259	0.259	"	"
H	0.375	0.380		0.377	0.377	0.377	0.377	"	"
I	0.490	0.510		0.501	.500	.500	.500	"	"
J	1.174	1.184		1.179	1.179	1.179	1.179	"	"
K	0.558	0.578		0.568	.566	.566	.566	"	"
L	1.174	1.184		1.179	1.179	1.179	1.179	"	"
M	1.365	1.375		1.370	1.370	1.370	1.370	"	"
N	2.495	2.505		2.500	2.500	2.500	2.500	"	"
O	4.119	4.129		4.124	4.124	4.124	4.124	"	"
P	0.115	0.135		.127	.127	.127	.129	Mic	GA-03
Q	0.115	0.135		0.135	0.135	0.135	0.135	Vern	GA-01
R	0.240	0.260		.257	.258	.255	.255	"	"
S	0.115	0.135		.123	.120	.123	.123	Mic	118-120
T	0.178	0.198		0.188	0.188	0.188	0.188	R-6	ref.
U	3.210	3.250		3.230	3.230	3.230	3.230	Vern	GA-01
V	0.230	0.250		.245	.245	.245	.245	"	"
W	0.115	0.135		.125	.122	.122	.122	Mic	118-120
X	0.308	0.313		0.310	0.310	0.310	0.310	Vern	GA-01
Y	0.760	0.765		0.764	0.764	0.764	0.764	"	"
Z	0.352	0.372		.364	.364	.364	.364	"	"
AA	0.470	0.530		0.500	0.500	0.500	0.500	R-6	ref.
AB	0.615	0.635		.627	.627	.627	.627	Vern	GA-01
AC	0.053	0.073		0.063	0.063	0.063	0.063	R-6	ref.
AD	0.240	0.260		.250	.250	.250	.250	Vern	GA-01
AE	1.500	1.520		1.514	1.513	1.511	1.512	H-6	31006
AF	0.115	0.135		0.135	0.135	0.135	0.135	Vern	GA-01
AG	0.240	0.280		.248	.248	.248	.248	"	"
AH	0.240	0.260		.253	.253	.253	.253	"	"
AI	2.000	2.020		2.004	2.003	2.002	2.002	H-6	31006
AJ	0.023	0.043		0.033	0.033	0.033	0.033	H-6	31006
Accept/Reject								Vern	GA-01

Measured by: HA
Date: 11/04/06

Audited by: SL
Date: 11/05/16

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order: 67665
Description: Saddle, Aft Outboard	Part Number: D2573
Inspection Dwg: D2573 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				15	26	17	18		
A	0.438	0.443						Vern	GA-01
B	1.745	1.755		1.750	1.750	1.750	1.750	"	"
C	3.495	3.505		3.500	3.500	3.500	3.500	"	"
D	1.745	1.755		1.750	1.750	1.750	1.750	"	"
E	7.990	8.010		8.000	8.000	8.000	8.000	Vern	CNC-02
F	0.490	0.510		.487	.480	.512	.515	Vern	GA-01
G	0.257	0.262		0.259	0.259	0.259	0.259	"	"
H	0.375	0.380		0.377	0.377	0.377	0.377	"	"
I	0.490	0.510		.500	.500	.505	.502	"	"
J	1.174	1.184		1.179	1.179	1.179	1.179	"	"
K	0.558	0.578		.566	.566	.568	.568	"	"
L	1.174	1.184		1.179	1.179	1.179	1.179	"	"
M	1.365	1.375		1.370	1.370	1.370	1.370	"	"
N	2.495	2.505		2.500	2.500	2.500	2.500	"	"
O	4.119	4.129		4.124	4.124	4.124	4.124	"	"
P	0.115	0.135		.126	.126	.126	.126	Mic	GA-03
Q	0.115	0.135		0.135	0.135	0.135	0.135	Vern	GA-01
R	0.240	0.260		.255	.255	.255	.255	"	"
S	0.115	0.135		.123	.123	.120	.120	Mic	118-120
T	0.178	0.198		0.188	0.188	0.188	0.188	R-6	ref.
U	3.210	3.250		3.230	3.230	3.230	3.230	Vern	GA-01
V	0.230	0.250		.245	.245	.244	.244	"	"
W	0.115	0.135		.122	.122	.123	.123	Mic	118-120
X	0.308	0.313		0.310	0.310	0.310	0.310	Vern	GA-01
Y	0.760	0.765		0.764	0.764	0.764	0.764	"	"
Z	0.352	0.372		.364	.364	.364	.364	"	"
AA	0.470	0.530		0.500	0.500	0.500	0.500	R-6	ref.
AB	0.615	0.635		.627	.627	.627	.627	Vern	GA-01
AC	0.053	0.073		0.063	0.063	0.063	0.063	A-6	ref.
AD	0.240	0.260		.252	.252	.252	.252	Vern	GA-01
AE	1.500	1.520		1.512	1.512	1.512	1.513	H-6	31006
AF	0.115	0.135		0.135	0.135	0.135	0.135	Vern	GA-01
AG	0.240	0.280		.248	.248	.248	.248	"	"
AH	0.240	0.260		.256	.256	.256	.256	"	"
AI	2.000	2.020		2.002	2.002	2.002	2.002	H-6	31006
AJ	0.023	0.043		0.033	0.033	0.033	0.033	Vern	GA-01
Accept/Reject									

Measured by: <u>JP</u>
Date: <u>11.5.10</u>

Audited by: <u>SL</u>
Date: <u>11/05/16</u>

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	67665
Description: Saddle, Aft Outboard	Part Number:	D2573
Inspection Dwg: D2573 Rev. E		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2573 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				#9	#10	#11	#12		
A	0.438	0.443						Vern	GA-01
B	1.745	1.755		1.750	1.750	1.750	1.750	"	"
C	3.495	3.505		3.500	3.500	3.500	3.500	"	"
D	1.745	1.755		1.750	1.750	1.750	1.750	"	"
E	7.990	8.010		8.000	8.000	8.000	8.000	Vern	CNC-02
F	0.490	0.510		.505	.508	.494	.494	Vern	GA-01
G	0.257	0.262		0.259	0.259	0.259	0.259	"	"
H	0.375	0.380		0.377	0.377	0.377	0.377	"	"
I	0.490	0.510		.500	.500	.500	.506	"	"
J	1.174	1.184		1.179	1.179	1.179	1.179	"	"
K	0.558	0.578		.568	.568	.568	.568	"	"
L	1.174	1.184		1.179	1.179	1.179	1.179	"	"
M	1.365	1.375		1.370	1.370	1.370	1.370	"	"
N	2.495	2.505		2.500	2.500	2.500	2.500	"	"
O	4.119	4.129		4.124	4.124	4.124	4.124	"	"
P	0.115	0.135		.126	.126	.126	.126	Mic	GA-03
Q	0.115	0.135		0.135	0.135	0.135	0.135	Vern	GA-01
R	0.240	0.260		.255	.255	.255	.255	"	"
S	0.115	0.135		.120	.120	.120	.120	Mic	118-120
T	0.178	0.198		0.188	0.188	0.188	0.188	R-6	ref.
U	3.210	3.250		3.230	3.230	3.230	3.230	Vern	GA-01
V	0.230	0.250		.244	.244	.244	.244	"	"
W	0.115	0.135		.122	.122	.122	.122	Mic	118-120
X	0.308	0.313		0.310	0.310	0.310	0.310	Vern	GA-01
Y	0.760	0.765		0.764	0.764	0.764	0.764	"	"
Z	0.352	0.372		.364	.364	.364	.364	"	"
AA	0.470	0.530		0.500	0.500	0.500	0.500	R-6	ref.
AB	0.615	0.635		.627	.627	.627	.627	Vern	GA-01
AC	0.053	0.073		0.063	0.063	0.063	0.063	R-6	ref.
AD	0.240	0.260		.253	.253	.253	.253	Vern	GA-01
AE	1.500	1.520		1.513	1.509	1.511	1.512	H-6	31006
AF	0.115	0.135		0.135	0.135	0.135	0.135	Vern	GA-01
AG	0.240	0.280		.248	.248	.248	.248	"	"
AH	0.240	0.260		.256	.256	.256	.256	"	"
AI	2.000	2.020		2.002	2.002	2.002	2.002	H-6	31006
AJ	0.023	0.043		0.033	0.033	0.033	0.033	Vern	GA-01
Accept/Reject									

Measured by:	RCQ
Date:	11.5.16

Audited by:	J
Date:	11/05/16

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.26	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

05 12 06 -ff

MATERIAL: 7075-T7351 (Q9-A-250/12)
(REF DART SPEC D6102-001)
FINISH: ACID ETCH, ALUMINE PER DART QSI D05 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER
DART QSI D05 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- 1 ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010
- 2 ENGRAVE PART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD 0.525
- 3 CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES)
- 4 CHAMFER 0.063" x 45° ALL AROUND
- 5 CHAMFER 0.033" x 45° (SEE DETAIL C)

E	05.07.13	ADD CHAMFER ON RIDGE NOTE 5
D	02.09.06	ADD RIDGES, TIGHTEN TOLERANCES
C	29.10.22	INCORP. DEC 9123/9079/9102 ADD DIMENSIONS PER TSR A1177
B	28.12.02	ADD CRAIN DR., 0.438 WAS 0.425
A	16.09.16	NEW ISSUE

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THAT IT IS NOT TO BE USED FOR ANY PURPOSE
OR COPIED OR COMMUNICATED TO ANY OTHER
PERSON WITHOUT WRITTEN PERMISSION FROM
DART NEUROSPACE LTD.

DESIGN DS	ISSUED BY PH	DART	DART AEROSPACE LTD. WARRINGTON, ENGLAND, ENGLAND
DATE 05 07 13	REV #	ISSUING NO 02573	SHEET 1 OF 1
		TITLE OUTER AFT SADDLE	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries